CLAIMS:

1.   A method for signal processing, wherein a sensor signal of an image sensor is
provided as an input and wherein the input is reconstructed in a filter to establish an output
for further processing, wherein the filter comprises at least one reconstruction-filter selected
from the group consisting of: a luminance-reconstruction-filter, a red-green-blue-color-
5   reconstruction-filter and a contour-reconstruction-filter, wherein
      —   the input comprises a plurality of pixels, and a pixel provides a color value assigned to at
            least one of the colors red, green or blue,
      characterized by
      —   applying the luminance-reconstruction-filter to an array of pixels of predetermined array
10   size comprising a number of pixels, wherein at least one of the number of pixels is
            formed by a re-pixel assigned to the color of red, at least one of the number of pixels is
            formed by a blue-pixel assigned to the color of blue, and at least one of the number of
            pixels is formed by a green-pixel assigned to the color of green,
      —   weightening the red- and/or the blue-pixel by a green-parameter, and
15   —   summarizing the pixels of the array into one output-pixel, and
      —   centering the output-pixel in the array, and
      —   applying the contour-reconstruction-filter in parallel with the color-reconstruction filter.

2.   The method as claimed in claim 1, characterized by positioning a center-
20   output-pixel of a second filter subsequent to a first filter in phase with the output-pixel, in
particular by centering the center-output-pixel at the same center position of the array as the
output-pixel.

3.   The method as claimed in any one of the preceding claims, characterized by
25   applying the luminance-reconstruction-filter to an array-size of 2x2 or 4x4 or 6x6.

4.   The method as claimed in claim 4, characterized by applying a low-pass-filter
to an array size of 4x4 or 6x6.

5.   The method as claimed in claim 4 or 5, characterized by combining the luminance-reconstruction-filter and the low-pass-filter into one single filter.

6.   The method as claimed in any one of the preceding claims, characterized by applying the color-reconstruction-filter to an array-size of 3 x 3 or 5x5, in particular has to array-size of 5x5 in case of a heavy sensor matrix.

7.   The method as claimed in claim 14, characterized by applying subsequent to a false-color-filter a post-filter of 2x2 array-size, to position a center-output-pixel of a predetermined small array of green-pixels in phase with a white-pixel which is centered with respect to the same array as that to which the luminance-reconstruction-filter has been applied to.

8.   The method as claimed in any one of the preceding claims, characterized by applying the contour-reconstruction-filter, in parallel with the luminance-reconstruction-filter and by adding their reconstructed signals thereafter.

9.   The method as claimed in any one of the preceding claims, characterized by applying the contour-reconstruction-filter to an array-size, which exceeds the size of an array to which the color-reconstruction-filter is applied to.

10.   The method as claimed in any one of the preceding claims, characterized by applying the contour-reconstruction-filter to an array-size of 5x5, in particular to an array-size of 4x4 or 6x6.

11.   The method as claimed in any one of the preceding claims, characterized by offering various luminance-reconstruction-filters for appliance, in particular by applying a luminance-reconstruction-filter to an array size of 2x2 in case of no or slight optical low pass filtering and/or applying a respective luminance-reconstruction-filter is applied to an increased array-size of 4x4 or 6x6 upon heavier optical low pass filtering.

12.   The method as claimed in any one of the preceding claims, characterized by offering various color-reconstruction-filters are offered for appliance, in particular by applying a 3x3-color-reconstruction-filter in case of a 4x4-luminance-reconstruction-filter

and/or applying a 5x5-color-reconstruction-filter in case of a 6x6-luminance-reconstruction-filter.

13.   The method as claimed in any one of the preceding claims, characterized by offering various contour-reconstruction-filters for appliance, in particular by applying a 4x4-contour-reconstruction-filter in case of a 3x3-color-reconstruction-filter or applying a 6x6-contour-reconstruction-filter in case of a 5x5-color-reconstruction-filter.

14.   The method as claimed in any one of the preceding claims, characterized by applying a 3x3-color-reconstruction-filter in combination with a 5x5 contour-reconstruction-filter, in particular by adding subsequently a color-reconstructed and a contour-reconstructed signal for further processing.

15.   An apparatus for signal processing, which is in particular adapted to execute the method as claimed in claims 1 to 16, comprising an image sensor for providing a sensor signal as an input and a filter for reconstructing the input to establish an output for further processing, wherein the filter comprises at least one reconstruction-filter selected from the group consisting of: a luminance-reconstruction-filter, a red-green-blue-color-reconstruction-filter and a contour-reconstruction-filter, wherein

–   the input comprises a plurality of pixels, and a pixel provides a color value assigned to at least one of the colors red, green or blue,
characterized in that
–   the reconstruction-filter is adapted to be applied to an array of pixels of predetermined array size comprising a number of pixels, wherein at least one of the number of pixels is formed by a red-pixel assigned to the color of red, at least one of the number of pixels is formed by a blue-pixel assigned to the color of blue, at least one of the number of pixels is formed by a green-pixel assigned to the color of green and
the apparatus is further comprising:
–   means for weightening the red- and/or the blue-pixel by a green-parameter,
–   means for summarizing the pixels of the array into one output pixel, and
–   means for centering the output pixel in the array and
–   means for parallel processing of the contour-reconstruction-filter and a color-reconstruction-filter.

16.   A computer program product storable on medium readable by a computing system, in particular a computing system of a camera, comprising a software code section which induces the computing system to execute the method as claimed in any one of claims 1 to 16 when the product is executed on the computing system, in particular when executed on a computing system of a camera.

17.   A computing system and/or semiconductor device, in particular a computing system of a camera, for executing and/or storing a computer program product as claimed in claim 18 thereon.

18.   A camera comprising an optical system, an image sensor and an apparatus as claimed in claim 16 or a computing system as claimed in claim 19.